



A REVIEW OF COMPETITION IN THE ENERGY SECTOR IN INDIA

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ABSTRACT

The Reforms in the Energy sector in India are necessary for the upliftment of debt ridden Discoms and generation companies. These reforms mainly focuses on the increase in the competition in the energy sector which will improve the efficiency of the Power sector companies and reduce the barriers to entry in the sector . This Paper try to study the Acts and the regulatory framework of the power sector which have reduced the bottlenecks of the industry.

KEYWORDS: DSM, CERC, SERC, Open access.

INTRODUCTION:

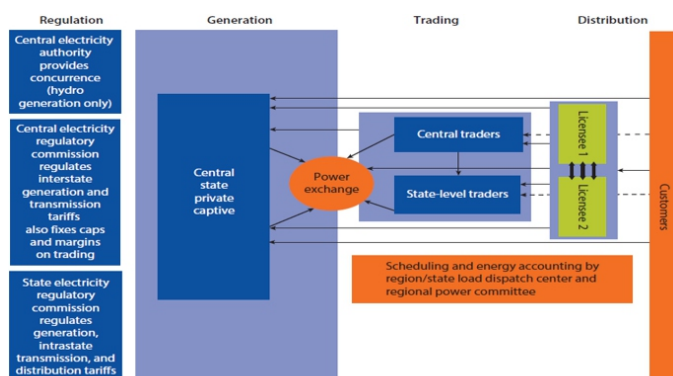
The Power Sector in India went through the breakthrough reforms which have promoted competition in the electricity sector in India. In 2003, the Electricity Act was enacted with the various other policy initiatives to promote competition and transform the power sector of the country. The Central Electricity Regulatory Commission (CERC) which was formed in 1998 have also facilitated competition by creating the regulatory framework of Indian Electricity Grid Code, Availability Based Tariff, inter-state trading, power exchanges and open access in inter-state transmission. This paper tries to review the acts and the regulatory framework which have increased the competition in the power sector.

Competition in the Energy Sector:

The Electricity Act 2003 was introduced to make the power sector more competitive market by allowing multiple buyers and sellers in the whole sale market, mandating open access to consumers above 1 MW and allowing trading by granting licence. At each point the electricity Act has tried to introduce multiple players in the value chain of the power sector. The Power market shown a good result when it delicensed generation which has allowed free entry and removed restrictions on the setting up of captive power plants . The Electricity Act has also opened sector for multiple licenses and private participation in transmission. It ensured that the transmission utility will not engage in the business of generating or trading which will ensure efficiency & avoid conflicts of interest in power dispatch. The Act provides choice to the consumer by providing multiple distribution licenses (even for parallel lines). The Provision of the non-discriminatory open access will help any licensee to serve to any customer by using any transmission and distribution line by paying a wheeling charge.

The recognition of the trading activity through licencing was followed by the introduction of the power exchanges. Anyone can become a trader by just qualifying the criteria laid by the state electricity regulatory commissions (SERCs). Allowing third-party sales and trading electricity in bulk were novel concepts that the Electricity Act introduced (Bhattacharyya 2005; Thakur 2005).

Industry Structure after 2003



Source: Mercados EMI 2013.

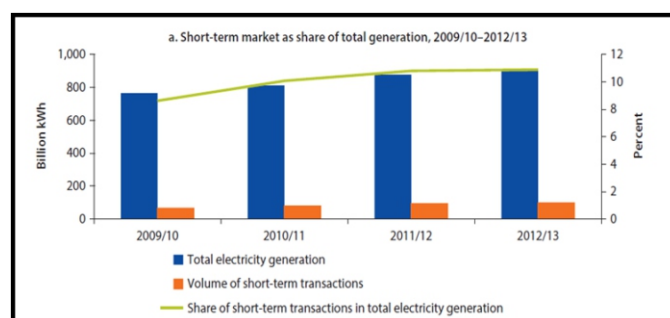
At the same time, the use of the frequency-linked deviation settlement (DSM) mechanism to balance the market has established a wholesale transaction platform. In 2005–06 the short term power market had matured enough that trading was taking place both directly and through licensed traders among discom licensees. The Central Electricity Regulatory Commission has tried to promote

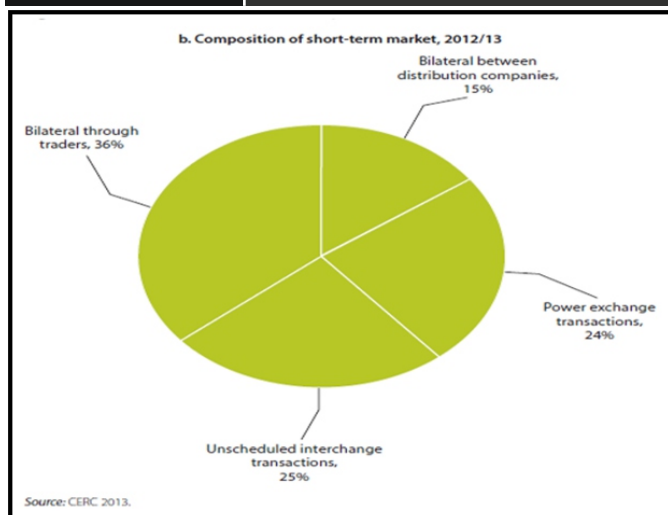
the trading by introducing the power exchanges which is an electronic online power market. India Energy Exchange was introduced in 2008 is a state of art energy trading platform which was followed by the Power Exchange India Ltd which began operating in 2009. The volume of electricity traded on this exchanges is nearly 11 % which is a small share of the total electricity generation but the price of the electricity traded on these exchanges is relatively less and continuously falling.

The Introduction of the open access in the power sector have given the chance to small generators to compete with the big generators. It has reduced the monopoly power of the firms and decreased the shortage of electricity in the country. In 2012, According to a report more than 160 end-consumers was buying power from power exchanges which was relying on open access. The Captive power plants and Independent power plants have been selling their surplus power through the power exchanges. These attempts have helped in the increase in the competition in the market by increasing the availability of power and by deepening the market.

The Central Electricity Regulatory Authority has also tried to promote competition in the Renewable energy markets by introducing renewable energy certificate mechanism. Every buyer of the power has to meet the renewable energy purchase obligation while purchasing power from the market .However, in its early days the renewable energy certificates are growing at a slower rate but it is positive development for the market. The large difference between the volume of buy and sell bids of renewable certificates placed at power exchanges shows that there is a higher demand for solar renewable energy certificates as compared to the non-solar renewable energy certificates.

As per the Report of Renewable Energy World 2013 the market have experienced a glut in 2013 because of the sellers outnumbering buyers which has caused prices to decrease.





Thermal Capacity Addition

In 2005, Under the Section 63 of the Electricity Act 2003 the government issued tariff-based competitive-bidding guidelines to increase competition in generation sector and to reduce the cost of power supplied. Earlier the distribution companies use to purchase electricity under negotiated contracts or by entering into a Memorandum of Understanding with independent power producers which has ensured a 16 percent return on equity to the producers. Today the medium-term procurement (one to seven years) and long-term procurement (greater than 7 years) takes place through the competitive bidding which fulfils peak-load, base-load and seasonal power requirements.

India adopted an optimised approach for ultra-mega power plants (UMPPs) with a capacity greater than 4,000 MW. In order to select a developer for each project the tariff-based competitive bidding was introduced which was conducted by the Power Finance Corporation. In 2012, 12 proposed UMPPs were identified out of which 4 projects were awarded to companies based on a two-stage competitive-bidding process. The response of the private sector to UMPP projects has been good, both in bringing down the overall tariff and in participation. As per IEA Report 2013, Reliance Power has won major Ultra mega power plants project (UMPP) with Sasan UMPP having the lowest bid of all (Rs 1.19/kWh, \$0.025/kWh), while the highest bid was for the imported-coal-fuelled Mundra UMPP (Rs 2.26/kWh, \$0.048/kWh).

For competitive procurement of power by discoms two routes are opened—Case 1 and Case 2, which depends on whether the state distribution utility is procuring the power and where its plant is located & what is their fuel. Under Case 1, the bidder takes on greater risk because he will be responsible for fuel, technology, land and the necessary clearances. Generally under Case 2 bids lower than Case 1 bids. Over the period from 2007-10 the 20 Gigawatts (GW) of thermal electricity was procured from the Case 1 route in which the states of Gujarat and Maharashtra were the leading states by procuring 5.8 GW and 5.1 GW of Power respectively. Under Case 2 route seven states have made their bids for the power procurement which totals at 10.4 GW in which Punjab (3.3GW) and Uttar Pradesh (4.5 GW) were the major procuring states.

The Central Electricity Regulatory Authority in 2011 issued a statutory advice to start the transition to tariff-based competitive bidding of the Public sector undertakings projects. The CERC carried out a detailed study by comparing the tariffs from the hypothetical plant contracted under the MOU with the competitively bid projects. In majority of projects the tariff from the competitively bidding Case 1 found to be lower than the tariff under the MOU. In the Case 2 bids all the MOU based tariff was found to be higher than the competitively bid tariffs.

The sharp rise in the fuel prices (imported coal) in 2011-12 brought a key weakness in the competitive procurement of the power. The risk needs to be optimised and balanced as the bidders alone will not be able to assume fuel price risks fully. To think about the lower prices of the competitively bidding tariffs which is around Rs1.50 (\$0.03) per Kwh would be premature because these contracts are seeking a regulatory relief in order to tackle the higher fuel risks. The government is amending the standard-bidding regulations for Case 2 power procurement which asks bidders to tell the capacity charge for a station heat rate of 2,300 kilocalories per unit that should be verified by an Independent authority. This approach of shared risk is believed to put lesser burden on customers than the previous model.

The Lack of coordination between the ministries of coal and power have handicapped the new thermal capacity addition which is shown by the large gaps between the required and the available coal supply. The Coal India's inability to supply the required amount of coal needs a review and a reoptimisation of the allocation of coal linkages. The Coal India Ltd. imported 30 million metric tons of coal in 2012 to meet increasing domestic demand and to tackle power short-

ages. The imported coal is costlier than the domestic coal which has made the government to consider a pooled price mechanism to cushion the shock. In order to deliver the to the power plants we require a huge logistical capability and planning but the supply and the price of the coal for plants is hurt by the inefficiencies in transport sector. So there is a need of cooperation between the coal ministry, power ministry and railways to improve the efficiency and reduce the bottlenecks of the industry.

CONCLUSION:

The standard measures of the competition suggests that the motive of the the Indian Electricity city Act, 2003 i.e. to promote competition in the power sector is going in the right direction. Increase in the Competition means decrease in the prices, large number of suppliers and buyers, reduction in the transaction cost, freedom to set prices, decrease in the market power of firms. The Short term Power Market have seen fall in the market power of the traders, Increase in the number of buyers and sellers in the market and decrease in the Prices. The Introduction of the competitive bidding in the generation segment have improved the overall performance of the sector.

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